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JAPANESE EXPORTS IN THE NINETEEN-FIFTIES: THEIR CHARACTERISTICS AND WEAKNESSES

By Noboru KAMAKURA*

I The Growth of Manufacturing Industries and the Growth of Exports

What could have caused the extremely high rate of growth of manufacturing industries? Needless to say such a high rate of growth must be due to various causes. If, however, only one of them were to be sorted out, it would be the rapid expansion of exports. The so-called "Export-Priority Project" is strongly supported by a majority of Japanese people, though it is merely from a common sense viewpoint. The so-called "Export Priority Project" can be classified into two types — one contending that it is of fundamental necessity for Japan to obtain enough foreign currency to meet expenses for the import of raw materials due to the domestic scarcity of them, and the other holding that it is essential for Japanese industries to increase effective demand by exports because the domestic market is relatively narrow. I do not deny that these views at least characterize aspects of the Japanese economy, but it must be admitted that they simply represent a partial outlook in many cases and are not quite thorough enough to make a complete penetration of the whole economy of this country.

Now, let us turn to what statistical figures indicate to start with. What are shown in Table 1 are index figures for the growth of exports in manufactured goods in major manufacturing countries in the world.

Based upon statistics of customs-clearance from thirteen countries, calculations are made for those commodities included in the International Standard of Industrial Classification (ISIC). It shows that the amount of manufacturing exports of the Federal Republic of Germany increased almost three times in eight years, while that of Japan increased 2.6 times during the same period. The countries are listed in Table 1 in descending order regarding the rate of growth of exports of manufactured goods. Of course it must be admitted that the way in which the first year (1951) and the concluding year

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(1959) have been selected for statistical purposes does make some difference to the results. Taking the case of the U.S.A. as an example, the Korean war had already started in 1951, and not much export business was done 1959 on account of the steel workers' strike. Needless to say, the index figures in Table 1 are likely to be underevaluated under such circumstances. Nor can it be denied that these index figures may be underevaluated or overevaluated for any particular country due to some unexpected circumstances in that country.

Nevertheless it may be fairly safe to conclude that this table shows the approximate difference in the growth of exports by country. At the bottom of Table 1 is shown the rate of growth of the total amount of manufactured goods for all thirteen countries put together. To add up the total amount of exports of each country the different monetary units were first converted into the U.S. dollar. Therefore, the rate of growth based on the total figures of the thirteen countries can be taken as an average rate of growth for each country, showing that the first six countries on the list register above average growth, while the other seven countries as a whole are below average.

The rate of growth of manufacturing production for each country can be calculated on the basis of the index of manufacturing production issued by the Government of the respective country¹⁾. When this result is compared with that in Table 1, it seems justifiable to accept the conclusion that the greater the rate of

Table 1 Index of Value of Manufacturing Exports, in 1959 (1951=100)

Countries	Index
Federal Republic of Germany	309.7
Japan	262.9
Australia	233.9
Italy	182.7
Netherlands	177.2
Canada	161.9
Sweden	155.9
Denmark	152.5
France	142.9
Norway	138.9
Belgium	129.9
United Kingdom	129.9
United States	119.3
Thirteen Countries Combined (Average)	156.3

Source: Organisation for European Economic Cooperation, *Foreign Trade, by Commodity*, various issues, supplemented by customs statistics of each country.

1) In respect to the thirteen countries during the period 1951-1959, the rank correlation coefficient between the rate of growth of industrial production and the exports of manufactured goods is 0.98.

growth of exports of manufactured goods any country has achieved, the greater the rate of manufacturing production has been in that particular country.

II The Market Share in Exports

The average rate of growth of exports of manufactured goods for the thirteen countries, for which the index is 156.3, is shown in the bottom line of Table 1. Now, it can be concluded that those countries that have a greater rate of increase than the average, like West Germany, Japan, etc., have increased their market share, while contrariwise those countries that have a slower rate of increase than the average, like the United Kingdom, the U.S.A., etc. have suffered a decrease in market share.

In Table 2 the index figures showing the changes in market share in the

Table 2 Changes in Market Share in the Exports of Manufactured Goods among Major Manufacturing Countries

Countries	Exports on assumption of constant shares (1951=100)	Index of changing shares
Federal Republic of Germany	168.1	184.2
Japan	132.8	197.7
Australia	156.4	149.6
Italy	133.4	137.0
Netherlands	141.1	125.6
Canada	145.3	111.4
Denmark	127.8	119.3
France	148.5	96.2
Norway	152.1	91.3
Belgium	153.3	84.7
United Kingdom	155.1	83.4
United States	168.2	70.9

Source: see Table 1.

thirteen countries are shown. The figures in the first column are those calculated on the assumption that the prevailing market share in 1951 for major manufactured goods remained the same in 1959. For purposes of reference, the rate of increase in the amount of exports by major commodities is shown in Table 3. These figures are calculated by converting the total amount of exports for the thirteen countries shown in Tables 1 and 2 into the U.S. dollar.

Table 3 shows that, while foods and beverages have barely made a 4.6% increase, clothing has increased twice as much. Now, if the export of foods and beverages had increased by 4.6 per cent equally for thirteen countries, then the mutual market share for foods and beverages among the thirteen countries should

Table 3 The Rate of Growth of Exports of Manufactured Goods
for Major Manufacturing Countries (1951-1959) (1951=100)

Commodities	Index
Foods and Beverages	104.6
Textiles	84.5
Clothing	203.2
Lumber and Lumber Products	201.8
Paper and Paper Products	118.6
Printing and Publication	218.9
Leather and Leather Products	153.5
Rubber and Rubber Products	128.3
Chemicals	165.8
Nonmetallic Products	141.6
Basic Metals	164.6
Metal Products	186.3
Others	201.2
Total of Manufactured Goods	156.3

Source: see Table 1.

remained the same. In a similar way, if the exports of clothing for each country have had increased by 103.2 per cent, then the market share for the exports of clothing should also have at least remained the same among these thirteen countries. The figures in the left hand column of Table 2 are those presumed to indicate the growth of exports for each country based on the assumption that the commodity listed in the Table has kept increasing in exports without underdoing any change in market share.

Needless to say, no growth can ever be made in reality in such a way and in fact the actual results are such as shown in Table 1. If the actual figures (Table 1) are compared with the assumed figures (Table 2) and the former divided by the latter, then the resulting index figures should roughly indicate the changes in market share of exports. The figures in the right hand column of Table 2 represent those index figures. They indicate that the higher the figures go up, the greater the amount of exports grows than in other countries, showing the greater market share. It can be seen that according to this table Japan has an extremely high index, indicating that she has increased her exports of manufactured goods nearly twice as much than the figures based on the supposition that her market share remained constant would suggest. This very point can be accounted for by the fact that the composition of Japanese exports is said to have undergone a considerable change in 1950.

III Change in the Composition of Manufacturing

During the nineteen fifties, manufacturing exports of industrial countries not only expanded remarkably in magnitude but also shifted drastically in commodity structure. As is shown in the following table, not only in the rate of increase but in the rate of contribution to total increase in manufacturing exports, engineering products have been most dynamic. More than one half of the increase in manufacturing exports from industrial countries during 1951 to 1959 was due to the increase in the exports of engineering products. On the other hand, the exports of textiles and clothing from industrial countries has declined, partly because of the rather stagnant nature of demand and partly because of the increased competition caused by the entry of the underdeveloped countries into the world market. To a lesser degree, chemicals have been dynamic and foods, beverages and tobacco have been stagnant from the industrial countries' point of view.

Those countries which specialized in, or which shifted to, exports of dynamic commodities naturally enjoyed large benefits from the development of manufacturing exports during the decade. As far as specialization is concerned, countries such as the United States, the United Kingdom and the Federal Republic of Germany, which had large engineering exports, enjoyed relatively more advantageous positions because of the changing structure of world trade. In 1951, at the outset of the period, the shares of the United States, the United Kingdom and the Federal Republic of Germany in world engineering exports, were approximately 42, 24 and 11 per cent respectively, in value terms. In exports of chemicals, the United States, the United Kingdom and France exceeded other industrial countries, sharing about 40, 14 and 12 per cent of total world exports respectively, in

Table 4 Changing Pattern of Manufacturing Exports from Industrial Countries Combined^{a)}, 1951 to 1960 (Percentage)

Exports	Annual rates of increase	Ratio of increase to increase in total manufacturing exports
Engineering Products	8.8	50.0
Chemicals	6.4	13.3
Basic Metals	8.4	16.1
Textiles and Clothing	1.6	2.7
Foods, Beverages and Tobacco	2.6	3.1
Other Manufactures	6.5	14.8
Total of Manufactured Goods	6.7	100.0

Source: See Table 1.

a) Including Austria, Belgium, Canada, Denmark, the Federal Republic of Germany, France, Italy, Japan, the Netherlands, Norway, Sweden, the United Kingdom and the United States.

1951. Due to increased competition among established rivals as well as the emergence of new countries in the world market, there has been a noticeable change in the shares of individual countries in exports of major groups of manufactures during the decade. In engineering exports, the shares of the Federal Republic of Germany, the United States and the United Kingdom in 1959 were 18, 17 and 16 per cent respectively with new strong competitors, such as Belgium and Japan, sharing 13 and 11 per cent respectively of total world exports. As for chemicals, the Federal Republic of Germany became the second largest exporting country next to the United States in 1959, surpassing the United Kingdom and France.

IV Luck and Flexibility

Despite the changing share in the exports of these major groups of manufactures in world exports, it cannot be denied that the above mentioned countries enjoyed relatively more advantageous positions in the course of development during the decade, simply because these countries already had well-established industries for commodities for which world demand expanded remarkably. Adaptation of export structure to meet changing demand in the world market, on the other hand, is not an easy task. It requires the capacity to shift a country's resources from one industry to another, the capacity to enter new industries and to quit the old. In contrast to the underdeveloped countries where, even substituting domestic products for imports is a challenging objective of government policy, entering into a new industry for increased domestic demand may not be so difficult for the industrial countries. To compete with foreign goods in the world market, however, requires far more effort. The role of investment and technological progress become very important in this context. Without such an intensive effort in capital formation for modernization, as well as for capacity expansion, it is almost impossible to seize an opportunity to expand a country's share in the world market. It should be noted, however, that the change in shares of world manufacturing exports cannot be solely explained by increased competitiveness on the part of the newly emerging countries versus the old exporting countries losing of ground. A chance factor, such as the regional distribution of exports, has played an even more important role in the process of changing the world pattern of trade. A notable example may be found in the United Kingdom where, even in 1960, only one half of manufacturing exports were directed to the expanding market in other industrial countries, whereas countries belonging to the European Economic Community as a whole are selling almost two thirds of their manufacturing exports to fellow members.

Table 5 Change in Competitiveness of Manufacturing Exports, 1951 to 1959
(Percentage)

Countries ^{a)}	Variation corresponding to		
	Share of market	Commodity composition	Competitive change
Germany (Federal Republic)	26.8	5.6	67.5
Japan	34.6	-14.5	79.9
Austria	42.1	—	59.9
Italy	68.1	-27.8	59.7
Netherlands	72.9	-19.7	46.8
Canada	90.9	-17.8	26.9
Sweden	100.7	7.8	-8.6
Denmark	107.2	-54.3	47.1
France	130.6	-18.4	-12.3
Norway	144.8	-10.9	-33.9
Belgium	188.1	-10.3	-77.8
United Kingdom	192.2	-2.6	-89.6
United States	292.2	61.7	-253.9

Source: Division of General Economic Research and Policies of the United Nations Secretariat, based on data from Statistical Office of the United Nations, *Yearbook of International Trade Statistics*.

a) Countries are arranged in descending order of rate of growth of manufacturing exports.

Although it is not so easy to see on balance how these above-mentioned factors, such as the original composition of manufacturing exports and the flexibility of adaptation, contributed to the performance of each country, an approximate indication may be obtained, as set out in Table 5. First, a hypothetical increase in manufacturing exports was computed for each country on the assumption that a country's share in the market remained the same. In other words, this hypothetical increase was computed by applying a unique rate of growth for every country's manufacturing exports. Secondly, another hypothetical increase was computed on the assumption that a country's share in exports in major groups of manufacturing remained unchanged during the period or the assumption that exports in major groups increased at the same rate among the countries. The first hypothetical increase thus computed was attributed to the share of market and the difference between the first and the second hypothetical increase was attributed to the commodity composition of each country. The residual, namely the difference between the actual increase and the second hypothetical increase, was assumed to be attributable to the change in competitiveness of each country²⁾.

As is to be expected, a part of the increase in manufacturing exports attributable to the share of market has a perfect reverse correlation with the rate of

2) A detailed discussion of the method applied here is contained in United Nations, Ingver Svennilson, *Growth and Stagnation in the European Economy* (Sales No.: 1954. II. E. 3), p. 324.

growth of manufacturing exports. If the share of the Federal Republic of Germany had remained unchanged, the increase in manufacturing exports of the country might have been only about one quarter of what the country actually achieved. At the other extreme, if the United States had been successful in keeping her world share, the increase in her manufacturing exports might have been almost three times as much as was actually achieved. Sweden is more or less on the border line as her world share of manufacturing exports did not change. Thus, the countries listed above Sweden in Table 5 increased their world share, whereas countries listed below Sweden lost part of their world share. The second column of the table indicates the degree of advantage of each country as to the commodity structure of manufacturing exports. There are only countries which have positive figures in the column, namely the Federal Republic of Germany, Sweden and the United States. The third column shows an indication of the changing position of each country in the world market. Austria, the Federal Republic of Germany, Italy and Japan are among the winners and Belgium, the United Kingdom and the United States are among the losers.

V Effect of Demand on Manufacturing Output

It is widely believed that, despite a very large share of private consumption expenditure, fixed capital formation and exports may play a more important role in the expansion of manufacturing output during the period of a decade. Table 6 shows the annual rates of growth of major components of final demand. It will be noted that, except for the United Kingdom and the United States, both fixed capital formation and export expanded more than private consumption expenditure. Even in these countries either one of these two items, fixed capital formation or exports, increased at a higher rate than consumption. Thus, in the United Kingdom, fixed capital formation played a leading role and in the United States exports lead all others.

In addition to this there is another reason to expect that increases in capital formation and exports will play a larger role in the expansion of manufacturing output than consumer expenditure. As is shown in Table 7 exports or capital formation have a much larger manufacturing content than private consumption and, therefore, even with the same amount of increase, exports or capital formation tend to attract a larger expansion of manufacturing output. For instance, if exports in France were increased by one million francs, manufacturing output is expected to increase by roughly 490 thousand francs, whereas increase in private consumption by the same amount tends to increase manufacturing output by only 190 thousand francs. Similarly, in the United States, the increase in expenditure on gross private capital formation by one million dollars is expected to

Table 6 Rates of Growth in Final Demand by Major Components, 1950 to 1960^{a)}
(Percentage per annum)

Countries ^{b)}	Private consumption expenditure	General government consumption expenditure	Gross domestic fixed capital formation	Exports of goods and services	Total final demand
Japan	8.2	6.9	17.2	12.7	9.5
Germany (Federal Republic)	7.3	5.7	9.9	16.5	7.6
Italy	4.5	7.4	9.0	9.7	5.9
Austria	5.1	4.1	7.5	14.1	5.9
France	4.3	3.7	5.0	5.7	4.3
Netherlands	3.5	3.3	5.7	9.8	4.7
Finland	—	—	—	—	4.6
Australia	3.1	4.0	4.6	6.9	3.9
Norway	2.6	5.0	3.0	6.8	3.5
Belgium	2.3	3.2	2.6	8.0	2.9
United States	3.2	6.1	2.0	5.3	3.3
United Kingdom	2.4	1.9	5.3	2.3	2.7
Canada	4.4	5.4	3.7	3.7	3.8
Denmark	2.6	4.0	6.4	7.1	3.4
Sweden	2.5	4.5	5.0	5.6	3.2
New Zealand	3.4	3.8	5.3	5.8	3.5

Source: Division of General Economic Research and Policies of the United Nations Secretariat based on data from Statistical Office of the United Nations, *Yearbook of National Accounts Statistics*.

a) 1950/51 to 1960/61 for Australia and New Zealand.

b) Countries are arranged in descending order of rate of growth of manufacturing output.

attract manufacturing output of 730 thousand dollars, whereas the increase in private consumption expenditure by the same amount tends to increase manufacturing output by only 270 thousand dollars. It is true that there exists a considerable difference in the effects of major items of final demand upon manufacturing, but the fact that the manufacturing content, including direct as well as indirect, of private consumption is lower than that of either fixed capital formation or exports, is common among the countries.

Combining these two factors, namely different rates of growth and different degrees of manufacturing content among major items in final demand, it is possible to trace back the major demand factors to which the expansion of manufacturing output during the past decade is attributable. Based on these information, together with statistical estimates of the increase in output and the increase in final demand, estimates were made in Table 7 to indicate the impact of final demand upon the output of various industries, including both direct and indirect effects. For example, in France about 30 per cent of the increase in private consumption was directed to manufacturing output and only 1.4 per cent to mining output. Similarly 64 per cent of the increase in exports consisted of the increase in manufactur-

ing output. The reason why the figures in each column do not add up to 100 per cent is simply because the table does not show other items, such as transportation, services, induced imports, and indirect taxes. One thing common among the countries is that manufacturing output was most favourably affected by the increase in almost any of the components of final demand in every country, the only exception being the impact of government expenditure in the Netherlands.

Even within manufacturing, the impact of change in demand was not felt evenly. In every country under review, the increase in gross domestic capital

Table 7 Impact^{a)} of Increase in Major Component of Final Demand
on Industrial Output, 1950 to 1960^{b)} (Percentage)

Countries and industries	Private consump- tion	Govern- ment expendi- ture	Gross private capital formation	Exports	Total demand
<i>France</i>					
Agriculture	6.8	0.4	0.3	2.5	4.3
Mining	1.4	1.0	3.1	2.8	1.9
Manufacturing	30.2	13.6	49.1	64.3	36.5
Food, Beverages and Tobacco	2.2	—	—	1.7	1.5
Textiles and Clothing	1.5	—	0.2	2.6	1.3
Chemicals	9.7	3.5	3.4	19.3	9.2
Basic Metals and Metal Products	9.4	8.8	42.7	33.1	18.6
Other Manufacturing	7.4	1.3	2.8	7.6	5.9
Construction	1.2	3.4	20.3	1.6	4.9
Public Utilities	2.0	1.5	3.1	2.8	2.2
<i>Germany (Federal Republic)</i>					
Agriculture	4.4	0.3	0.6	1.4	2.4
Mining	2.0	1.8	1.6	3.7	2.4 ^{c)}
Manufacturing	24.9	19.5	46.7	56.3	38.4
Food, Beverages and Tobacco	6.3	—	—	1.0	2.9
Textiles and Clothing	5.2	0.9	0.6	2.2	3.0
Chemicals	3.8	3.5	3.1	10.2	5.6
Basic Metals and Metal Products	6.0	9.6	32.1	35.5	20.5
Other Manufacturing	3.6	5.5	10.9	7.4	6.4
Construction	1.1	3.0	18.0	—	4.3
Public Utilities	—	—	—	—	—
<i>Italy</i>					
Agriculture	14.0	—	0.3	5.0	6.9
Mining	2.0	—	2.1	3.0	2.0
Manufacturing	28.2	19.5	40.3	44.4	33.8
Food, Beverages and Tobacco	6.5	—	—	2.2	3.1
Textiles and Clothing	2.4	0.5	0.3	3.4	1.9
Chemicals	7.5	5.6	4.2	17.3	8.8
Basic Metals and Metal Products	4.9	8.6	25.8	16.3	13.0
Other Manufacturing	6.9	4.8	10.0	5.2	7.0

Construction	—	—	29.7	—	7.2
Public Utilities	4.2	2.3	1.1	1.6	2.6
<i>Japan</i>					
Agriculture	12.7	3.9	2.1	7.5	7.7
Mining	0.4	0.9	0.5	0.6	0.5
Manufacturing	22.6	22.6	36.3	36.6	28.9
Food, Beverages and Tobacco	2.3	0.6	0.2	0.4	1.2
Textiles and Clothing	2.9	2.0	1.1	7.0	2.7
Chemicals	4.1	5.0	2.7	4.6	3.7
Basic Metals and Metal Products	7.8	9.2	29.4	17.5	16.5
Other Manufacturing	5.5	5.8	2.9	7.1	4.8
Construction	0.7	6.4	7.1	0.9	3.4
Public Utilities	—	—	—	—	— ^{d)}
<i>Netherlands</i>					
Agriculture	4.2	—	1.3	4.1	3.4
Mining	0.6	0.6	0.5	0.6	0.5
Manufacturing	14.6	11.6	20.3	22.2	19.3
Food, Beverages and Tobacco	3.5	—	—	3.4	2.6
Textiles and Clothing	2.5	—	—	1.9	1.6
Chemicals	1.5	1.5	1.2	4.5	3.0
Basic Metals and Metal Products	3.8	7.1	16.5	10.0	9.3
Other Manufacturing	3.3	3.0	2.6	2.4	2.8
Construction	1.8	11.9	19.4	1.8	5.4
Public Utilities	2.8	1.3	—	1.3	1.5
<i>Norway</i>					
Agriculture	2.0	0.2	0.6	2.4	1.8
Mining	—	—	—	—	—
Manufacturing	11.8	8.2	18.9	18.0	15.4
Food, Beverages and Tobacco	4.5	—	—	3.1	2.7
Textiles and Clothing	2.8	0.4	0.5	—	0.9
Chemicals	0.4	0.4	—	2.7	1.4
Basic Metals and Metal Products	2.5	5.2	16.2	7.1	7.0
Other Manufacturing	1.6	2.2	2.2	5.1	3.4
Construction	—	1.8	10.2	—	1.7
Public Utilities	4.1	4.2	1.3	1.6	2.5
<i>United Kingdom</i>					
Agriculture	5.4	—	—	0.8	2.9
Mining	-0.5	-0.2	-0.6	-0.8	-0.6
Manufacturing	21.5	20.4	54.5	46.4	33.1
Food, Beverages and Tobacco	5.2	—	—	0.9	2.8
Textiles and Clothing	—	—	—	0.1	—
Chemicals	6.0	2.6	2.6	7.3	5.1
Basic Metals and Metal Products	5.5	10.3	43.4	30.3	18.8
Other Manufacturing	4.8	7.5	8.5	7.8	6.4
Construction	1.4	2.6	12.9	0.5	4.1
Public Utilities	4.0	1.7	3.5	1.6	3.3
<i>United States</i>					

Agriculture	3.4	1.7	0.5	5.2	2.7
Mining	0.9	2.1	1.3	3.6	1.4
Manufacturing	13.4	37.9	48.4	35.0	25.0
Food, Beverages and Tobacco	2.5	1.1	0.1	2.3	1.8
Textiles and Clothing	1.9	1.8	1.0	1.4	1.7
Chemicals	3.6	5.7	4.1	9.2	4.5
Basic Metals and Metal Products	3.6	15.7	32.0	20.0	10.8
Other Manufacturing	1.8	13.6	11.2	2.1	6.2
Construction	—	—	—	—	—
Public Utilities	2.1	5.9	3.4	2.3	3.3

Source: Division of General Economic Research and Policies of the United Nations Secretariat, based on data from United Nations, *Economic Survey of Europe in 1957* (Sales No.: 58. II. E. 1), and national sources.

a) Including direct as well as indirect effect.

b) 1950 to 1959 for France and the Netherlands.

c) Public utilities included.

d) Public utilities included in transport, trade and services.

formation favoured the basic metal industry and metal products industry combined. Increases in exports gave the largest stimulus to this industry in France, the Netherlands, Norway and the United Kingdom, and hence there is no doubt about the fact that industries which were most favourably affected by the change in demand during the past decade are manufacturing in general, and basic metals and metal products in particular.

Table 8 is based on the same information but shows the relative importance of each item in final demand regarding the increase in output. It is quite understandable that manufacturing output in the Netherlands and Norway is much more export-oriented than that in other countries. In France, Italy and the United Kingdom, private consumption in the domestic market played a far more important role than exports. The importance of private consumption becomes almost dominant in the food processing industry in those three countries. Even for textiles and clothing, the contrast between the Netherlands and Norway on the one hand and France, Italy and the United Kingdom on the other is very clear. As far as the chemical industry is concerned, Italy belongs to the group of export-dependent countries. In metal products and basic metals, consumption played a very minor role and either capital formation or exports attracted a large increase in production. In short, judging from the experiences of those countries, exports and investment exercised a significant role in promoting a large increase in manufacturing output.

What is made clear by these tables is the fact that manufacturing industries in Japan are by nature not so dependent upon exports. It may appear to be a strange conclusion if seen in the light of the so-called "Export Priority Project". According to what is shown in Table 5, out of each growth of manufacturing

Table 8 Relative Impact^{a)} of Major Components of Final Demand on
Manufacturing Output, 1950 to 1960^{b)} (Percentage)

Countries and industries	Private consumption	Government expenditure	Gross private capital formation	Exports
<i>France</i>				
Manufacturing	47.2	4.2	24.2	24.4
Food, Beverages and Tobacco	84.8	—	—	15.2
Textiles and Clothing	68.4	—	3.2	28.4
Chemicals	60.0	4.2	6.7	29.1
Basic Metals and Metal Products	28.8	5.3	41.3	24.6
Other Manufacturing	71.1	2.5	8.7	17.7
<i>Germany (Federal Republic)</i>				
Manufacturing	26.8	4.1	24.5	44.6
Food, Beverages and Tobacco	89.9	—	—	10.1
Textiles and Clothing	71.3	1.9	4.1	22.7
Chemicals	28.2	5.1	11.3	55.4
Basic Metals and Metal Products	12.1	3.8	31.5	52.6
Other Manufacturing	23.4	7.0	34.5	35.1
<i>Italy</i>				
Manufacturing	33.7	7.0	29.0	30.3
Food, Beverages and Tobacco	83.9	—	—	16.1
Textiles and Clothing	51.4	3.2	3.8	41.6
Chemicals	34.9	7.7	11.7	45.7
Basic Metals and Metal Products	15.1	8.0	48.1	28.8
Other Manufacturing	39.7	8.4	34.8	17.1
<i>Japan</i>				
Manufacturing	35.4	6.2	42.9	15.5
Food, Beverages and Tobacco	88.0	3.7	4.6	3.7
Textiles and Clothing	48.6	5.9	14.2	31.3
Chemicals	49.9	10.7	24.3	15.2
Basic Metals and Metal Products	21.4	4.5	61.1	13.0
Other Manufacturing	51.8	9.7	20.5	18.0
<i>Netherlands</i>				
Manufacturing	19.8	3.6	17.8	58.9
Food, Beverages and Tobacco	34.3	—	—	65.7
Textiles and Clothing	39.6	—	—	60.4
Chemicals	13.5	3.0	6.8	76.7
Basic Metals and Metal Products	10.8	4.5	29.8	54.9
Other Manufacturing	31.9	6.6	16.4	45.1
<i>Norway</i>				
Manufacturing	22.0	5.8	18.7	53.5
Food, Beverages and Tobacco	47.8	—	—	52.2
Textiles and Clothing	87.0	5.0	8.0	—
Chemicals	8.2	3.4	—	88.4
Basic Metals and Metal Products	10.2	8.1	35.3	46.5
Other Manufacturing	13.8	6.9	10.0	69.3

<i>United Kingdom</i>				
Manufacturing	33.3	5.7	38.9	22.1
Food, Beverages and Tobacco	95.1	—	—	4.9
Textiles and Clothing	50.0	—	—	50.0
Chemicals	60.5	4.6	12.3	22.6
Basic Metals and Metal Products	15.1	5.0	54.5	25.4
Other Manufacturing	38.7	10.8	31.3	19.2
<i>United States</i>				
Manufacturing	30.1	43.3	19.6	7.0
Food, Beverages and Tobacco	76.7	16.7	0.4	6.2
Textiles and Clothing	60.4	30.0	5.7	3.9
Chemicals	44.5	36.2	9.2	10.1
Basic Metals and Metal Products	19.1	41.5	30.2	9.2
Other Manufacturing	16.8	63.1	18.4	1.7

Source: See Table 8.

a) Including direct as well as indirect effect.

b) 1950 to 1959 for France and the Netherlands.

production in the ten years ending with 1960, the growth caused by the increase in exports is as small as 15.5 per cent. Putting aside the U.S.A., that has the least dependence on exports, it can easily be seen that the ratio of the extent of dependence for Japan is extraordinarily small. When we compare this conclusion with the fact that among all growths of manufacturing production 44.6 per cent in the Federal Republic of Germany and 58.9 per cent in the Netherlands are directly due to the role of exports, it may probably appear extremely strange to find that the growth of manufacturing production in Japan happens to have the least dependence on exports.

This is none other than the reflection of the weakness peculiar to the composition of Japanese manufacturing industries, but leaving this point to be discussed in separate paper, I now have to invite attention to the following two points. The first point is that Table 8 merely represents the relative ratio in terms of percentage. The growth of manufacturing production in Japan, over ten year period ending in 1960 as shown already, is found to occupy a considerably high percentage when compared with other countries. Therefore, if the exact rate of growth of manufacturing production caused by exports could be made tangible, a different result would naturally be obtained.

The second point is that private investment is included as one items of the final demand. I see no necessity to quote "Principle of Derived Demand" at this time. It is because of the expectation that what is produced by investment might be absorbed either by consumption, exports or government expenditure that any investment is made. Putting aside the problem of whether this expectation will come true or not, what cannot be overlooked is the fact that the growth of exports and private consumption are reflected in the increase in investment.

It is very clearly shown in Table 8 that investment played an extremely important role in the case of Japan in comparison with other countries. It coincides with the assertion that the high rate of economic growth in Japan after the last World War was caused mainly by rapid expansion in investment. When it is taken into due consideration that the rapid growth of exports was reflected in the volition to invest, thereby exerting its influence on the expansion of manufacturing production through the large amount of such investment, the influence exerted on manufacturing production should have been far greater than what is shown in Table 8.

It is impossible to find the exact extent or weight of its indirect effect. However, assuming that exports had greatly contributed to the growth of manufacturing production, it would be no hard task to infer that it was most likely that the contribution was made indirectly through investment, and not directly*.

* The present paper consists a part of *A Study of Japanese Economy* (published in Japanese in 1965), and it should be noted that major part of the computation in this paper was carried in 1962 when the author was associated with the United Nations in New York.